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AUTHOR Mathews, Jerry G.; Johnson, Gary P.
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ABSTRACT

The 1993 Mississippi Report Card was the result of legislative and accountability processes. The state's Education Reform Act of 1982 created a mandate to establish a performance-based school-accreditation system. This paper presents findings of a study that disaggregated and analyzed the total per-pupil expenditure indicators in the 1993 Mississippi Report Card in order to clarify the relationship between financial indicators and accreditation ratings. The study population consisted of all 149 school districts in Mississippi. Findings indicate that the total per-pupil expenditure indicator is not clear and comparable as mandated by state statutes; does not present an accurate assessment of the relationship between school-district accreditation and financial factors; and does not discriminate sufficiently in assigning school districts into accreditation levels 1-5. It is recommended that the evaluation use additional financial-indicator variables, such as school district transportation funding and free-lunch funding. Another suggestion is to conduct further studies to find out why districts in accreditation levels 1 and 2 are not spending an equivalent per-pupil expenditure on instruction, compared to districts in levels 3 and 5. Nine tables are included. (Contains 22 references.) (LMI)

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Per Pupil Expenditures and School District Accreditation: What Does the Total Per Pupil Expenditure Indicator in the 1993 Mississippi Report Card Really Mean?

Jerry G. Mathews
College of Education
Idaho State University

Gary P. Johnson
Department of Educational Leadership
Mississippi State University

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Per Pupil Expenditures and School District Accreditation: What Does the Total Per Pupil Expenditure Indicator in the 1993 Mississippi Report Card Really Mean?

INTRODUCTION

Kirst (1990) reported that beginning in the 1980s school reformers introduced accountability legislation at both the national and state levels which focused on merit schools, outcome-based accreditation, interstate achievement comparisons, and **state school report cards**. Presently, approximately 40 states have developed and disseminated report cards to the public.

Student and School Indicators of Accountability

Student and school indicators (variables) have become the latest focus in school reform efforts and legislative accountability mandates (Brown, 1990). Student, school, and school district indicators include a wide range of variables such as revenues, qualifications of personnel, curriculum program schedules, dropout and graduation rates. These indicators and others are now included in different public school accountability programs across the country.

Emergence of the Mississippi Report Card

In Mississippi, accountability emerged as a statewide issue in 1975 when the Mississippi legislature expressed a concern about the quality of education in its school districts (Prince, 1985). The Mississippi legislature subsequently required statewide testing in grades 4, 6, and 8 and the publishing of test score results. Saterfield and Woodruff (1984) have stated that Mississippi "joined the push for quality improvements in education with the passage of the Education Reform Act (ERA) of 1982" (p. 2). The Phil Hardin Foundation (1983) has characterized the Education Reform Act of 1982 as a comprehensive strategy for the improvement of public education in Mississippi. The Foundation noted that

the ERA contained significant laws and programs established to address educational problems in four areas: (a) student achievement, (b) staff development of teachers, administrators, and other professionals, (c) local school management, and (d) school governance, leadership, and finance. Included as part of the ERA was the mandate to establish a performance-based school accreditation system that would be based on research findings on school effectiveness (Saterfield and Woodruff, 1984). As a result of these legislative and accountability processes, the first Mississippi Report Card, the 1993 Mississippi Report Card (Mississippi State Department of Education, 1993) was published and disseminated to the public in the spring of 1994.

The Problem

Odden (1990), in a study of educational indicators, argued that an indicator system is needed that provides information about educational inputs (school resources and school factors), processes (organization and instructional quality), and outputs (student outcomes and participation). Odden believes that single indicators or even large numbers of indicators, by themselves, are not sufficient to explain the complexity of the schooling process.

Newspaper reports have indicated that the media, readers, and law makers were not able to interpret and understand the information in the 1993 Mississippi Report Card (Mississippi State Department of Education, 1993). The Report Card does not provide clear and comparable [on the level at which schools, school districts, and the state public education system are performing] information based on what is called for in the implied theory of school accreditation. The implied theory of school accreditation is based upon (a) Senate Bill No. 3350 (Mississippi Code of 1972 & Supp. 1994), and State Department of Education (SDE) Bulletin 171 (Mississippi State Department of Education, 1994d).

Interpretation of the information in the Report Card by the public, for example, is an important consideration for potential residents of Mississippi as was illustrated by

Hayden (1994a). Hayden noted that the Report Card is important to people moving into Mississippi in deciding whether or not to choose public schools for their children's education. One person interviewed by Hayden, after having read data in the Report Card, had "questions about how (some districts) spend so much [money] per pupil and don't do so well [test scores], when another district doesn't spend so much and does well" (p. 18A).

In the same article, Hayden (1994a) has noted that, although the Mississippi Report Card lists Per Pupil Expenditure as one indicator variable, it is not clear what it means in isolation and unrelated to other indicator variables. She states that each school district's per pupil expenditure "includes all money coming in for operating costs. That can make for a great mix" (p. 18A). In other words, some districts have large transportation expenditures included in their per pupil expenditure variable while others do not. The correct and accurate interpretation of indicator variables and an understanding of their relationship to each other are important to law makers in Mississippi. In another article, Hayden (1994b, May 1) quotes Mississippi State Representative Charlie Williams of Senatobia as saying, "You can't just put a dollar figure on what it will cost to educate each child" (p. 18A). There was need for an analysis of the Report Card to disentangle the Total Expenditure indicator variable in order to present a clear picture of the relationship, if any, that existed between the indicator variable and school district accreditation in Mississippi.

The per pupil expenditure variable in the Columbus Municipal Separate School District Report Card was open to misinterpretation in an editorial (Editorial, 1994, May 27). The editorial reported that the Columbus School District (city school district in Lowndes Country) spent more money than Lowndes County School District and Tupelo City School District; but, that Columbus School District had a lower graduation rate. The question raised in the editorial (but unanswerable by Report Card data) is not how much money is spent, but for what purpose is the money being spent? The Report Card does not

make a clear distinction as to the breakdown of the Total Per Pupil Expenditure indicator variable. Therefore, the **problem** is that the data in the 1993 Mississippi Report Card is not clear and comparable as was intended of the Senate Bill No. 3350 (Mississippi Code of 1972 & Supp. 1994) and SDE Bulletin 171 (Mississippi State Department of Education, 1994d).

Purpose of the Study

The Total Per Pupil Expenditure indicator variable in the 1993 Mississippi Report Card tended to be the most common focal point in the newspaper articles. Therefore, the **purpose** of this study was to disaggregate and analyze the Total Per Pupil Expenditure indicator in the 1993 Mississippi Report Card (Mississippi State Department of Education, 1993) in order to clarify the relationship between these financial indicators and accreditation ratings.

The Research Questions

The basic research question addressed the need for clear and comparable information in the Report Card. The questions was: How can data in the 1993 Mississippi Report Card be presented as clear and comparable as mandated in Senate Bill No. 3350 (Mississippi Code of 1972 & Supp. 1994) and SDE Bulletin 171 (Mississippi State Department of Education, 1994d)? Related research questions were: **(a) Does the Total Per Pupil Expenditure indicator variable present an accurate assessment of the relationship between school district accreditation and financial factors?, (b) Does disaggregation of the Total Per Pupil Expenditure indicator present a more accurate assessment of the relationship between school district accreditation and financial factors?, and (c) What is the difference in computed school district accreditation levels based on disaggregated financial indicator variables in the Mississippi Report Card and the**

accreditation levels assigned to school districts by the Mississippi State Department of Education?

REVIEW OF THE LITERATURE

Why Use Report Cards and Indicators?

Pancrazio (1991) has stated that:

> State education agencies have begun to incorporate performance-based indicators within their accreditation structures or regulatory systems for public schools. In an age of wide-spread recognition for the need for educational reform, these mechanisms [indicators] were not sufficient to inform policy makers or the public on how well the reforms are working. (p. 3)

Odden (1990), in studies of state report cards, has noted that strategies are needed to insure educational indicator systems include variables that provide information or data that is valid and useful for making policy decisions:

> Monitoring outcomes alone does not provide enough information to determine why changes in outcomes occur over time. Unless the indicator systems that are developed and used provide information far beyond outcome measures, we will be unable to say why achievement trends rise, fall, and plateau. We will be unable to make sound suggestions for new policies to shift trends into desired directions. (p. 24)

What Researchers Have Found in Report Card Studies

Although the use of state report cards is a relatively new phenomenon, the literature survey located several empirical studies of school report cards in southeastern states that have been conducted by Tennessee-based education consultant Gordon C. Bobbett and his associates (Bobbett, French, & Achilles, 1992a; Bobbett, French, & Achilles, 1992b; Bobbett, French, & Achilles, 1992c; Bobbett, French, & Achilles, 1993; Bobbett, French, & Achilles, 1994). Empirical studies of report cards by Bobbett et al. (1992a, 1994) have suggested a need for systematic examination of report card data to provide educators and policy makers with information on not only indicator variables, but also on the relationships between indicator variables and student achievement measures.

Bobbett et al.(1992a) has studied the relationships among indicator variables in the 1992 Tennessee Report Card. This study was guided by several concerns: (a) how district characteristics related to academic achievement, (b) how district characteristics related to each other, (c) how districts performed in terms of the characteristics reported, (d) whether reported characteristics represented all factors that influenced student achievement, and (e) how the study could best inform policy makers. Bobbett et al. concluded as a result of the Tennessee Report Card study that:

> the data [as reported] in the report cards may provide interesting statistics but only a small amount of information useful in improving education. Further, whatever information is entered into the report card is of minimal use until additional analysis [sic] such as those conducted in this study are performed. (p. 23-24)

Bobbett et al. (1994) conducted a similar study on Arkansas's report card. Bobbett et al. concluded in the study that a comprehensive understanding of the interactions between variables is essential. When advanced statistical models are applied to the data, researchers and policy makers can begin to comprehend the impact of interactions of variables.

The Mississippi Report Card

The Mississippi Report Card (Mississippi State Department of Education, 1993) is used by the State Department of Education as a public school accountability tool in Mississippi. The purpose of the 1993 Mississippi Report Card format and particular indicator variables included in the Report Card were to describe and characterize school district performance and to link the school district performance indicator profile to the accreditation level of each and every school district for all the school districts in the state. A school district Report Card contains a school district accreditation level rating and data in the following categories: (a) school district demographic characteristics, (b) student information, (c) teacher information, (d) special education, (e) vocational education, (f)

national standardized student achievement testing, (g) state student achievement testing, (h) financial information, (i) Chapter 1, and (j) gifted education.

Bulletin 171 and Accreditation Levels

Bulletin 171 (Mississippi State Department of Education, 1994d) outlines five school district accreditation levels based on both process and performance standards. These are: (a) accredited-1-Probation is assigned to a district that complies with less than 100% of the process standards and/or less than 70% of the performance standards, or has remained at Level 2 for two years without demonstrating continuous improvement in performance; (b) accredited-2 is assigned to a district that complies with 100% of the process standards and 70 to 99% of the performance standards; (c) accredited-3 is assigned to a district that complies with 100% of the process and performance standards; (d) accredited-4 distinguished achievement is assigned to a district that meets 100% of the process standards and 70% or more of the performance standards required for this accreditation level; and, (e) accredited-5 model achievement is assigned to a district that meets the standards required for this accreditation level.

Bulletin 171 and Process and Performance Standards

The process and performance standards for Mississippi school districts are outlined in Bulletin 171 (Mississippi State Department of Education, 1994d). The document identifies and defines these three areas of performance standards/measures: (a) the Functional Literacy Examination (FLE), (b) the Subject Area Testing Program (criterion-referenced tests), and (c) the Stanford Achievement Test (norm-referenced tests).

Process Standards

Accreditation levels 1 through 3 are based on process standards outlined in Bulletin 171 (Mississippi State Department of Education, 1994d). These process standards are based on the five characteristics of effective schools and they are used to rate school

districts in accreditation levels 1 through 3. They include: (a) educational leadership, (b) instructional organization, (c) effective instruction, (d) staff development, and (e) school climate.

Performance Standards

Accreditation levels 1 through 3 are assigned based on school district performance across 13 accreditation outcome measures listed in the accreditation section of the Mississippi Report Card (Mississippi State Department of Education, 1993). Accreditation levels 4 and 5 are based on school district performance across the 13 accreditation outcome measures listed in the accreditation section of the Report Card and on certain process standards listed in Bulletin 171 (Mississippi State Department of Education, 1994d).

The Study of the 1993 Mississippi Report Card

An Empirical Study of the 1993 Mississippi Report Card (Mathews, 1995) was a study designed to analyze the relationships between the indicator variables presented in the Report Card. The study included analysis of 37 of the 66 indicators in the Report Card and, both directly and indirectly, tested Mississippi's implied theory of school district accreditation.

Theoretical Implications for School District Accreditation

The theoretical structure and basis of the Mississippi Report Card (Mississippi State Department of Education, 1993) and school district accreditation process is contained in two documents: Senate Bill No. 3350 (Mississippi Code of 1972, 1972 & Supp. 1994) and The Requirements of the Commission on School Accreditation: Policies, Procedures, and Standards, (Mississippi State Department of Education, 1994d). Development of the Report Card and the school district accreditation rating procedure were driven by these proposals presented by the Mississippi legislature and the State Department of Education. Senate Bill No. 3350:

> Beginning with the 1993-1994 school year and each school year thereafter, the State Board of Education, acting through the Office of Educational Accountability, shall develop a public school reporting system, or 'Mississippi Report Card,' on the performance of students and schools at the local, district and state level. In developing said report card, the Office of Educational Accountability shall collect . . . student achievement data . . . and compare such data with national standards . . . . The Mississippi Report Card shall provide more than reports to parents on the level at which their children are performing; said report shall provide clear and comparable public information on the level at which schools, school districts and the state public education system are performing. (pp. 24-25)

The second document that called for measures to determine school district accreditation was the State Department of Education Bulletin 171 (Mississippi State Department of Education, 1994d) which states that: "In accordance with State Board Policy, the Commission [on school accreditation] will determine the annual accreditation level of a school district based on its degree of compliance with both process and performance standards" (p. 16).

The Mississippi Report Card (Mississippi State Department of Education, 1993) lists indicator variables (constructs) that were intended for and are used to compare Mississippi's 149 school districts by simple averages (means) or ranks. The intention of the SDE in the theoretical creation and structuring of the Report Card was to present school district indicator variables and to use those indicator variables to present a systematic view of school district performance and accreditation levels (Mississippi Code of 1972, 1972 & Supp. 1994; Mississippi State Department of Education, 1993; Mississippi State Department of Education, 1994d).

The methods used in the study, An Empirical Study of the 1993 Mississippi Report Card (Mathews, 1995), were similar to those used in the report card studies by Bobbett et al. (1992a, 1994). Unlike the Mississippi Report Card study, Bobbett et al. (1992a, 1994) did not have school district accreditation levels included as report card indicators in their studies. Also, they did not use other financial data, such as those data used in the Mississippi Report Card study, as a part of their report card studies.

METHODS

A causal comparative study of financial data in the Mississippi Report Card (Mississippi State Department of Education, 1993) was conducted. The population in this study consisted of all 149 public school districts in Mississippi. Since the entire population of school districts in Mississippi were used in the study, the results of the study are applicable only to school districts in Mississippi for that particular school year. Data for this study on school district indicator variables and accreditation levels were obtained from school district Mississippi Report Cards (Mississippi State Department of Education, 1993). Report Card data were obtained from the Mississippi State Department of Education and was in electronic format on 3.5 inch computer diskettes. Additional data were collected directly from the Annual Report of the State Superintendent of Public Education (Mississippi State Department of Education, 1994a), and the Public School Enrollment 1993-94 End of First Month (Mississippi State Department of Education, 1994c). Data from the Financial Accounting Manual for Mississippi Public School Districts (Mississippi State Department of Education, 1994b) were obtained from the State Department of Education on 3.5 inch diskettes.

Analysis

Means, standard deviations, and frequency distributions were computed to provide a descriptive profile of school districts in each accreditation level based on the Total Per Pupil Expenditure indicator variable and the disaggregated Total Per Pupil Expenditure indicator variable in the 1993 Mississippi Report Card. In addition, discriminant analysis was employed to determine the difference between computed school district accreditation levels and the accreditation levels assigned by the Mississippi State Department of Education based on disaggregated total per pupil expenditure indicator variables. These indicator variables were categorized as financial factors as follows:

Assessed valuation per pupil: Assessed valuation per pupil is defined as the school district property value assessment in dollars divided by the average daily attendance in each school district.

Average per pupil expenditure: Average per pupil expenditure is defined as the total annual expenditures per pupil in dollars based on average daily attendance in each school district.

Average per pupil expenditure for instruction: This indicator is defined as the annual instructional expenditures in dollars per pupil including Chapter 1 funds in each school district based on average daily attendance.

Average per pupil expenditure for instruction excluding Chapter 1 funds: This indicator is defined as the average annual instructional expenditures in dollars without the inclusion of Chapter 1 funds per pupil in each school district based on average daily attendance.

Average per pupil expenditures for extracurricular activities: This indicator is defined as the annual expenditures per pupil in dollars based on average daily attendance in each school district for all school sponsored student activities within the school district.

Average per pupil revenues for extracurricular activities: This indicator is defined as the annual revenues per pupil in dollars based on average daily attendance in each school district for school sponsored student activities.

FINDINGS

Descriptive Profile

This section contains a descriptive profile of six financial indicators with tables summarizing each indicator variable. The indicator variables presented in this section are: (a) assessed valuation per pupil, (b) per pupil expenditure, (c) per pupil expenditure for instruction, and (d) per pupil expenditure for instruction excluding Chapter 1 funds, (e) per

pupil revenues for extracurricular student activities , and (f) per pupil expenditures for extracurricular student activities.

Assessed Valuation Per Pupil

Table 1 shows that the mean value of the assessed valuation per pupil indicator variable increased as school district accreditation levels increased. The combined 5% trim mean value was 16,781 dollars.

Table 1

Mean Assessed Valuation Per Pupil in Average Daily Attendance in Dollars for School Districts by Levels of Accreditation

Accreditation Level	M	SD	5% Trim M	n
1	14,126	4,274	14,178	14
2	17,610	6,621	16,963	34
3	17,960	7,424	17,161	99
5[a]	19,413	1,372	[b]	2
Combined	17,501	7,072	16,781	149

[a]No accreditation level 4 was assigned to any school district in the 1993 Mississippi Report Card. [b]No 5% trim mean was calculated with only two districts in accreditation level 5.

Per Pupil Expenditure

The mean value of the per pupil expenditure variable decreased as school district accreditation levels increased (see Table 2). The combined 5% trim mean per pupil expenditure value was 3,496 dollars.

Table 2

Mean Per Pupil Expenditure in Dollars for School Districts by Levels of Accreditation

Accreditation Level	M	SD	5% Trim M	n
1	3,613	311	3,605	14
2	3,716	514	3,671	34
3	3,437	346	3,425	99
5	3,397	313		2
Combined	3,517	407	3,496	149

Table 3 indicates that the 5% trim mean value for the per pupil expenditure for instruction variable is relatively comparable for school districts across all accreditation levels. The combined 5% trim mean was 1,988 dollars for the per pupil instructional expenditure variable.

Table 4 shows that the 5% trim mean of per pupil expenditures for instruction excluding Chapter 1 funds for school districts in accreditation level 2 was lower than accreditation level 1. However, the 5% trim mean increased as school district accreditation level increased to level 3 and to level 5.

Table 3

Mean Per Pupil Expenditure for Instruction in School Districts by Levels of Accreditation

Accreditation Level	M	SD	5% Trim M	n
1	2,036	168	2,035	14
2	2,043	245	2,021	34
3	1,981	193	1,973	99
5	2,021	55		2
Combined	1,999	203	1,988	149

Table 4

Mean Per Pupil Expenditures for Instruction Excluding Chapter 1 Funds in School Districts by Levels of Accreditation

Accreditation Level	M	SD	5% Trim M	n
1	1,663	216	1,658	14
2	1,634	235	1,623	34
3	1,776	203	1,771	99
5	1,896	121		2
Combined	1,732	218	1,728	149

Extracurricular Student Activities

Table 5 shows that the 5% trim mean value for per pupil revenues for extracurricular student activities increased as accreditation levels increased. The combined 5% trim mean value for all 149 school districts was 31 dollars per pupil. Table 6 indicates that per pupil expenditures for extracurricular activities were relatively consistent across accreditation levels 1, 2, and 3. The combined 5% trim mean value was 11 dollars.

Table 5

Mean Per Pupil Revenues for Extracurricular Activities in School Districts by Levels of Accreditation

Accreditation Level	M	SD	5% Trim M	n
1	18	19	16	14
2	29	28	27	34
3	40	42	36	99
5	4	3		2
Combined	35	38	31	149

Table 6

Mean Per Pupil Expenditures for Extracurricular Activities in School Districts by Levels of Accreditation

Accreditation Level	M	SD	5% Trim M	n
1	10	6	10	14
2	11	11	10	34
3	12	9	11	99
5	6	2		2
Combined	12	9	11	149

Summary of Descriptive Analysis Based on Financial Indicators

The mean value of the assessed valuation per pupil indicator variable increased as school district accreditation levels increased. When the Total Per Pupil Expenditure indicator variable and disaggregated Total Per Pupil Expenditures indicator variables were used to describe school districts, those districts in accreditation levels 3 and 5 had lower percentages of per pupil expenditures than school districts in levels 1 and 2.

However, school districts in levels 3 and 5 had higher percentages of per pupil expenditures for instruction excluding Chapter 1 funds than school districts in accreditation levels 1 and 2. School districts assigned to accreditation levels 1 and 2 had higher per pupil expenditures for instruction (including Chapter 1 funds) than school districts assigned to accreditation levels 3 and 5.

School districts in levels 3 and 5 had higher percentages of revenues for extracurricular activities than school districts in levels 1 and 2. The percentages of expenditures for extracurricular activities were relatively consistent across accreditation levels.

Discriminant Analysis of Computed and Assigned Accreditation Levels Based on Financial Indicator Variables

The disaggregated Total Per Pupil Expenditure indicator variables plus additional financial factors found in the Report Card were included in this procedure to determine the if any differences existed between computed school district accreditation levels and those accreditation levels assigned by the Mississippi SDE. These variables were: (a) per pupil expenditure, (b) expenditure for district administration, (c) assessed valuation per pupil, (d) per pupil expenditure for instruction, (e) per pupil expenditure for instruction excluding Chapter 1 funds, (f) per pupil revenues for extracurricular activities, and (g) per pupil expenditures for extracurricular activities.The dependent or grouping variable was accreditation level. The structure coefficients shown in Table 7 indicate the relative importance of the financial indicator variables in 3 discriminant functions calculated in the equation. When viewing the structure matrix, financial indicators ordered by size of the correlation between the variables and the discriminant scores define the discriminant functions.

Three indicators met the minimum Wilks' Lambda criteria as discriminating variables that defined the discriminant functions (see Table 8). These three indicators were: (a) percentage of expenditure for district administration, (b) per pupil expenditure for instruction excluding Chapter 1 funds. and (c) per pupil expenditure for instruction. The test of the resulting overall Lambda (.611) indicated that the association ($R_c^2 = .389$) between the discriminant scores and accreditation level membership was statistically significant, $\chi^2(9, N=149) = 69.69, p = .000$.

Table 7

Stepwise Discriminant Analysis: Structure Coefficients Between Financial Indicator Variables and Canonical Discriminant Functions

Variable	Discriminant Functions		
	1	2	3
Percent expenditure for district administration .	.500	.811[a]	.304
Per pupil revenue for extracurricular activities	-.095	-.156[a]	-.070
Per pupil expenditure for extracurricular activities	-.020	.050[a]	-.039
Per pupil expenditure for instruction	.198	-.059	.978[a]
Per pupil expenditure for instruction excluding Chapter 1 funds	-.396	.140	.908[a]
Average per pupil expenditure	.422	.007	.771[a]
Assessed valuation per pupil in ADA	.099	.064	.365[a]

Note. Variables are ordered by the size of the correlation within each function.
[a]Denotes largest absolute correlation between each variable and any discriminant function.

Table 8

Stepwise Discriminant Analysis for Accreditation Levels: Wilks' Lambda of Financial Indicator Variables

Step	Variables in the equation Variable entered	Wilks' Lambda	prob.
1	Percent expenditure for district administration . .	.857	.000*
2	Per pupil expenditure for instruction without Chapter 1 funds .	.759	.000*
3	Per pupil expenditure for instruction . . .	.611	.000*

*$p < .05$

The results of the discriminant analysis, which employed the financial indicator variables, indicated that approximately 25% (n=38) of the school districts were classified by discriminant analysis in accreditation levels different from accreditation levels assigned by the State Department of Education (see Table 9). For the financial indicator variables, the discriminant analysis classified approximately 75% of the school districts in the same levels as those assigned by the State Department of Education.

Table 9

Stepwise Discriminant Analysis: Classification Results of Accreditation Levels Using Variables in the Financial Indicators Category

		Predicted level membership and percent			
Assigned level	n	1	2	3	5
1	14	1 7.1%	6 42.9%	7 50.0%	0 0.0%
2	34	2 5.9%	15 44.1%	17 50.0%	0 0.0%
3	99	0 0.0%	4 4.0%	95 96.9%	0 0.0%
5[a]	2	0 0.0%	0 0.0%	2 100.0%	0 0.0%

Note. Approximately 75% of the districts were classified by discriminant analysis in the same levels as was assigned by the State Department of Education. [a]No accreditation level 4 was assigned to any school district in the 1993 Mississippi Report Card.

Summary of Analysis of Financial Indicators Using Discriminant Analysis

Discriminant analysis was used to determine which financial indicators were important predictor variables used to classify school districts into one of four accreditation levels. The discriminating variables that were defined by the discriminant analysis to classify school districts within one of four accreditation levels were (a) percentage expenditure for district administration, (b) per pupil expenditures for instruction excluding Chapter 1 funds, and (c) per pupil expenditures for instruction. All the school districts were assigned to either accreditation level 1, level 2, or level 3 by the discriminant analysis. No school districts were assigned to accreditation level 5. Based on the discriminant analysis of the seven financial indicator variables, 38 (25%) of the 149 school districts were classified in accreditation levels different from those assigned by the State Department of Education.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Does the Total Per Pupil Expenditure indicator variable present an accurate assessment of the relationship between school district accreditation and financial factors? The analysis of the financial indicators in this study indicated the Total Per Pupil Expenditure indicator variable as presented in the 1993 Mississippi Report Card was not clear and comparable as mandated in Senate Bill No. 3350 (Mississippi Code of 1972 & Supp. 1994) and SDE Bulletin 171 (Mississippi State Department of Education, 1994d).

Does disaggregation of the Total Per Pupil Expenditure indicator present a more accurate assessment of the relationship between school district accreditation and financial factors? The descriptive analysis in this study presented a clear, comparable, more accurate picture of the relationship between district accreditation levels and the percentage of per pupil expenditures for instruction when the Total Per Pupil Expenditure indicator variable was disaggregated. Although school districts in accreditation levels 1 and 2 spent more money per pupil overall, these districts spent less money per pupil on instruction when excluding Chapter 1 funds. This finding may indicate that less local and state money for instructional purposes is available to the school districts in accreditation levels 1 and 2. This is further supported by the finding that school districts in accreditation levels 1 and 2 tend to have lower assessed property valuation than school districts in levels 3 and 5.

What is the difference in computed school district accreditation levels based on disaggregated financial indicator variables in the Mississippi Report Card and the accreditation levels assigned to school districts by the Mississippi State Department of Education? It can be concluded that the Report Card, in its present format, does not discriminate well in assigning school districts into

accreditation levels 1 through 5 based on the systematic examination of the seven financial indicator variables in this study.

The link between school district accreditation levels and the 1993 Mississippi Report Card indicator variables is tenuous. Only three indicator variables of the seven examined in this study were significant discriminating variables that placed school districts into accreditation levels using the discriminant analysis. Using discriminant analysis, the accreditation system did not classify school districts into accreditation levels 4 or 5. Given the tenuous link between the accreditation levels and the Report Card financial indicator variables, the accreditation system and the Report Card format needs some rethinking or reexamination regarding the implied theory of school district accreditation.

Recommendations

The findings indicated that the use of the additional financial indicator variables, not included in the Report Card, provided valuable information about school district accreditation status. These additional financial variables more clearly described the relationship between financial indicators and accreditation status; and, they were significant predictors of accreditation outcome measures in the discriminant analysis. It can be recommended that further studies be conducted to determine how additional financial indicator variables such as school district transportation funding and free lunch funding impact school district accreditation level ratings and accreditation outcome measures.

Further studies should be conducted to determine why school districts in accreditation levels 1 and 2 are not spending an equivalent per pupil expenditure on instruction (excluding Chapter 1 funds) compared to school districts in levels 3 and 5. Quantitative studies such as this one only determines what has occurred; therefore, more in-depth qualitative case studies of particular school districts are needed to determine how and why these school districts are successful or not successful. These are the <u>why</u> and <u>how</u> questions this study and the 1993 Mississippi Report Card did not answer.

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